

## **Round Mountain Thinning Timber Sale**

### **Final Decision and Decision Rationale**

United States Department of the Interior  
Bureau of Land Management  
Oregon State Office  
Salem District, Cascades Resource Area

T. 11 S., R. 1 E. Section 33; WM.  
T. 12 S., R. 1 E. Section 3; WM  
Environmental Assessment Number # OR084-04-20  
Crabtree Creek and Hamilton Creek Watersheds  
Linn County, Oregon

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BLM/OR/WA/PL-08/041+1792

## 1.0 Introduction

The Bureau of Land Management (BLM) has conducted an environmental analysis for the Round Mountain Thinning Timber Sale Project. This analysis is documented in the *FY 2006 Timber Sale Thinning Environmental Assessment and Finding of No Significant Impact*, EA # OR084-04-20 (EA) and the associated project file. The EA proposed action is a proposal to thin 195 acres of 37-65 year old timber stands and is described in *EA Sections 1-0-4.0, 8.0, 9.0-14.0*. A summary of the EA proposed action can be found in **section 3.0** of this Decision Rationale (DR). A Finding of No Significant Impact (FONSI) for EA # OR084-04-20 was signed on July 19, 2005. The EA and FONSI document was then made available for public review from July 20, 2005 to August 19, 2005. No comments specific to the Round Mountain timber sale were received during the EA comment period.

## 2.0 Decision

I have decided to implement a timber sale for the Round Mountain project area consisting of the proposed action as described in EA, pp. 15-21, 92-97, with modifications described in this Decision Rationale (DR **sections 2.0, 8.0 -10.0** pp. 3-5, 18-21, 24, 25) and will be called the Round Mountain Thinning Timber Sale. This decision is based on site-specific analysis in the EA described above, the supporting project record, public comment, and management recommendations contained in the Crabtree (2001) and Hamilton Creek (1995) Watershed Analyses, as well as the management direction contained in the *Salem District Resource Management Plan* (RMP) (May 1995), which are incorporated by reference in the EA.

The decision is hereafter referred to as the “selected action”. The selected action implements units RM33b, RM 3a, RM 3c, and RM 3d of the EA proposed action (EA pp.97, 104), with adjustments to unit acres and unit boundaries based on field verification of the original unit mapping (DR maps 1 and 2, DR sections **8.0, 9.0**, pp. 18-21). The following is a summary of the selected action. The BLM proposes to:

### **Timber Harvest**

Harvest approximately 143 acres within T. 11 S. R.1 E. Section 33; T. 12 S. R.1 E. Section 3, WM. This harvest includes:

- Thinning 142 acres. Thinning will take place within the following Land Use Allocations:
    - 128 acres within the Matrix Land Use Allocation (LUA), which includes:
      - 61 acres within the General Forest Management Area (GFMA) LUA
      - 67 acres within the Connectivity LUA
    - 14 acres within the Riparian Reserve LUA
- Within the GFMA LUA, units would be thinned by removing suppressed, co-dominant, and occasional dominant trees (thinning from below), leaving residual overstory trees at a uniform stocking level. Variable density thinning would take place in stands within the Riparian and Connectivity LUAs. In all prescriptions, generally the largest trees would be left. An average minimum canopy closure of 40% would be maintained within the Matrix LUA (GFMA and Connectivity), and an average minimum canopy closure of 50% would be maintained in the Riparian Reserve LUA. An average of 50-120 trees would be retained within the thinning units (EA p.106).

- Clearing 1 acre of vegetation within the road right-of-way accessing unit 1. This action will take place within the GFMA LUA.

### **Logging Systems**

- Harvest approximately 106 acres plus 1 acre in the road right-of-way using ground-based yarding.
- Harvest approximately 36 acres using skyline yarding.

### **Road Work and Haul:**

- *New Road Construction and Right-of-way (Road #11-1E-33.1):* This road is behind locked gates.
  - Construct approximately 0.2 miles of new road to accommodate logging equipment and log transport within the GFMA LUA. No new road construction will take place within the Riparian Reserve LUA. Approximately 1 acre of vegetation will be cleared for the road right-of-way. See Timber Harvest, above.
  - The new construction (0.2 miles) will be blocked with one trench and berm barricade and stabilized after logging operations. Stabilizing entails installing water-bars or other shaping of roads for drainage and/or placing woody debris, and seeding with native species seed and sterile mulch, along with fertilization to re-establish vegetation (EA p. 19).
- *Road Renovation/Maintenance:* Renovate and maintain approximately 4.6 miles of existing road. Renovation may include blading and shaping of roadway and ditches, removing rocks/boulders, clearing brush from cut and fill slopes, applying rock surfacing material to depleted surfaces and cleaning or replacing culverts (EA Pg.16). For this sale, the culvert work consists of replacing six (6) failing culverts with new 24" diameter culverts, at intermittent stream crossings. Excavation needed for the replacement of culverts would take place within the current road prism.

### **Fuel Treatments**

A total of 12 acres will have fuel treatments. The areas to be treated are located within unit 1, generally along property lines. Based on site conditions after harvest, fuel treatments may be either piling and burning, or mastication and scattering. "Mastication" is breaking slash into pieces generally less than one foot long and scattering these pieces in the stand. Within 30 feet of the edge of each landing all tops, broken pieces, limbs and debris over 1 inch and longer than 3 feet will be piled and covered. Piles will be 20 feet minimum distance from residual trees. Piles will be burned after thinning has occurred and fall rains have begun.

### **Other**

After logging operations have been completed, access to skid trails would be blocked by leaving logging debris to prevent Off Highway Vehicles (OHVs) from driving on skid trails.

### **Design Features**

Project Design Features for this project are described in *EA sections 2.2.2 and 8.1.2.1* (pp. 18-21, 92). These design features apply to the Selected Action, are summarized in **DR section 10.0**, pp. 24-25, and have been included in the timber sale contract.

### Summary of the Selected Action

Table 1 summarizes the Selected Action. The Selected Action is displayed in DR Maps 1 and 2 in DR section 9.0, pp. 20-21.

**Table 1: Summary of the Selected Action**

Action			Within Unit(s)	Total
Timber Harvest (Acres)	Commercial Thinning	General Forest Management Area	1	61
		Connectivity	2,3,4	67
		Matrix Land Use Allocation	1,2,3,4	128
		Riparian Reserve Land Use Allocation	1,2,3,4	14
	Road Right of way clearing		1	1
	Total Acres of Timber Harvest			143
Logging System (Acres)	Ground-Based - Skidding		1,2,3,4	107
	Skyline – Uphill, One-end suspension		2 , 4	36
Road Work	Road Access	New road construction (miles)	1	0.2
		Road Renovation/ Road Maintenance (miles)		4.6
	Road Stabilization/ Blocking	The new road construction (miles)		0.2
		Trench and berm road blocks (#) on road 11-1E-33.1		1
Fuels Treatments (Acres)	Pile Burning (hand pile and machine pile)		1	12

### 3.0 Alternatives Considered

- No Action - No timber harvest or connected actions would take place.
- The EA Proposed Action: The Round Mountain Thinning Timber Sale Project is a proposal to thin approximately 195 acres of mixed-conifer stands with an average age ranging from 37-65 years old (at the time of the EA).
- Selected Action: The Selected Action, a modification of the EA proposed action is described in DR sections 2.0, 8.0 -10.0 pp. 3-5, 18-21, 24, 25.

Table 2 of this Decision Rationale (DR Table 2) shows how the Selected Action meets the purpose and need of the project as compared to the no action and any other EA action alternatives. This table is a summary of the table found in EA section 9.1 (Table 27).

**Table 2: Comparison of the Alternatives with Regard to the Purpose of and Need for Action**

Purpose and Need	No Action	Proposed Action and Selected Action
Develop timber sales that can be successfully offered to the market place.	Does not fulfill.	Fulfills.

<i>Purpose and Need</i>	<i>No Action</i>	<i>Proposed Action and Selected Action</i>
Achieve a desirable balance between wood volume production, quality of wood, and timber value at harvest (RMP p. D-3).	<b>Partially fulfills.</b> Partially meets wood volume production over course of rotation <sup>1</sup> . Logs at end of rotation would be a smaller diameter than the action alternatives. Smaller diameters generally reduce the quality and value compared to thinned stands.	<b>Fulfills.</b> Maintains volume production over the course of the rotation <sup>1</sup> . Promotes faster diameter growth by reducing tree densities therefore allowing trees more room to grow. Previous experience with this type of treatment has resulted in larger diameter logs at the end of the rotation
Maintain the health and growth of developing stands.	<b>Does not fulfill.</b> Stand health and tree growth rates would begin to decline if stands are not thinned. Competition would result in mortality of smaller trees and some co-dominant trees in the stands.	<b>Fulfills.</b> Stand health and tree growth rates would be maintained as dominant trees are released to grow faster as a result of removing smaller and some co-dominant trees competing with the dominant overstory for space, light, and nutrients.
Retain elements that provide ecosystem diversity (snags, old growth trees, etc.) so that a healthy forest ecosystem can be maintained with habitat to support plant and animal populations (RMP p. 1, 20)	<b>Partially fulfills.</b> Retains existing elements, but does not enhance conditions to provide these elements for the future stand.	<b>Fulfills.</b> Retains the elements described under “no action” on untreated areas of the stands in the project areas and encourages development of larger diameter trees and more open stand conditions in treated areas. This adds an element of diversity to the landscape not provided on BLM lands as soon under the No Action alternative.
Increase height and diameter to develop future large coarse woody debris, snag habitat, in-stream large wood and other elements of late-successional forest habitat. (RMP p.1)	<b>Fulfills</b> , but not as soon.	<b>Fulfills.</b> Would meet the Purpose and Need sooner (10-30 years) by concentrating stand growth on fewer stems. See above.
Provide for structural and spatial stand diversity on a landscape level in the long term.	<b>Fulfills</b> by maintaining current trends that would develop diversity slowly.	<b>Fulfills.</b> Accelerates changes in some parts of some stands to develop more elements of diversity faster. Experience has shown that lower tree densities give the remaining trees more room to grow, resulting in larger trees. As trees die, larger trees become larger snags and larger down logs than currently exist within the stands to be thinned. Large snags and down wood, currently lacking in the stands to be thinned, are components associated with increased diversity.
Provide appropriate access for timber harvest, silvicultural practices, and fire protection vehicles.	<b>Fulfills.</b> Existing roads meet this purpose and need.	<b>Fulfills.</b> Would implement maintenance of feeder roads, allowing improved access for management activities.
Reduce potential human sources of wildfire ignition by controlling access and treating fuels.	<b>Partially fulfills.</b> Access is adequately controlled by existing gates and berms.	<b>Fulfills.</b> The sale area is behind privately controlled gates. New road construction would be blocked after logging activities.
Reduce adverse environmental effects associated with identified existing roads within the project areas (RMP p. 11).	<b>Fulfills.</b>	<b>Fulfills.</b>

<sup>1</sup> The point where the stand is ready for regeneration harvest

Further comparison of the EA proposed action and Selected Action are described in DR **sections 8.0 and 9.0**, pp. 18-21)

#### **4.0 Decision Rationale**

Considering public comment, the content of the FY 2006 Timber Sale Thinning EA and supporting project record, the management recommendations contained in the 1995 and 2001 Watershed Analyses, and the management direction contained in the RMP, I have decided to implement the Selected Action as described in DR section **2.0**, pp. 3-5. The following is my rationale for this decision.

1. No Action: This alternative was not selected because it does not meet the Purpose and Need directly, or delays the achievement of the Purpose and Need (*EA section 1.3*), as shown in DR Table 2, above.
2. The Proposed Action: Unit 33d from the EA proposed action was not selected because further field reconnaissance determined that the stand currently has diverse stand structure including clumps, gaps, along with a hardwood component. Therefore the Silviculturist determined that the stand does not need thinning at this time.

Variable density thinning and the inclusion of clumps and gaps were prescribed in the Riparian and Connectivity LUAs (EA p. 15). I have decided to defer the inclusion of clumps and gaps at this time to allow for the development of increased growth rates and stand diameters in the proposed units, as a result of current treatments.

3. Selected Action: The Selected Action, described in DR **sections 2.0 and 3.0, 9.0-10.0**, pp. 3-6, 18-21, 24, 25:
  - Meets the purpose and need of the project FY 2006 Timber Sale Thinning EA section 1.2, as shown in DR Table 2 (DR p.5-6).
  - Complies with the Salem District Record of Decision and Resource Management Plan, May 1995 (RMP) and related documents which direct and provide the legal framework for management of BLM lands within the Salem District (EA section 1.2, p. 13, as modified by DR section **5.0** pp.7-14).
  - Is responsive to concerns for an economically efficient project.
  - Prepares the stands within the Riparian and Connectivity LUAs for the creation of clumps and gaps in the future.
  - Decreases potential for human caused fire starts and improves fire suppression opportunities by treating slash along property lines.
  - Incorporates new information on northern spotted owl (DR **section 5.0**, p.8).
  - Would not contribute to the expansion of invasive/nonnative weed populations.
  - Would not have significant impact on the affected elements of the environment (EA pp. 2-6, DR **section 7.0**, pp. 16, 17) beyond those already anticipated and addressed in the RMP EIS.
  - Uses the minimum transportation system to facilitate implementation of the project.

## 5.0 Compliance with Direction

The analysis for the Round Mountain Timber Sale, documented in the FY 2006 Timber Sale Thinning EA, is site-specific and supplements analyses found in the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement*, September 1994 (RMP/FEIS). This project has been designed to conform to the *Salem District Record of Decision and Resource Management Plan*, May 1995 (RMP) and related documents which direct and provide the legal framework for management of BLM lands within the Salem District (EA p. 2). These documents may be reviewed at the Cascades Resource Area office. Compliance with the current direction for the Aquatic Conservation Strategy has been updated and is described in DR **section 5.0**, pp. 9-14.

### **Survey and Manage Species Review**

The Secretary of Interior removed the Survey & Manage (S&M) Mitigation Measure Standards and Guidelines from the Bureau of Land Management's (BLM) Resource Management Plans in the area of the Northwest Forest Plan on July 25, 2007 in the *Record of Decision to Remove the Survey and Manage Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl* (July 2007).

The Round Mountain Thinning Timber Sale is in compliance with the U.S. District Court order in Northwest Ecosystem Alliance et al. v. Rey et al. dated October 11, 2006. This order amended paragraph three of the January 9, 2006 injunction, and describes categories of projects exempt from this injunction. One of those categories is thinning projects in stands younger than 80 years old. The Round Mountain Selected Action falls within this category; it is a thinning project in stands that are 40-68 years old (DR **sections 2.0, 9.0** – DR Maps 3 and 4).

### **Northern Spotted Owl (NSO) Status Review:**

The following information was considered in this decision: a/ *Scientific Evaluation of the Status of the Northern Spotted Owl* (Sustainable Ecosystems Institute, Courtney et al. 2004); b/ *Status and Trends in Demography of Northern Spotted Owls, 1985-2003* (Anthony et al. 2004); c/ *Northern Spotted Owl Five Year Review: Summary and Evaluation* (USFWS, November 2004); and *Northwest Forest Plan – The First Ten Years (1994-2003)*; d/ *Status and trend of northern spotted owl populations and habitat, PNW Station Edit Draft* (Lint, Technical Coordinator, 2005). Although the agencies anticipated a decline of NSO populations under land and resource management plans during the past decade, the reports identified greater than expected NSO population declines in Washington and northern portions of Oregon, and more stationary populations in southern Oregon and northern California.

The reports did not find a direct correlation between habitat conditions and changes in NSO populations, and they were inconclusive as to the cause of the declines. Lag effects from prior harvest of suitable habitat, competition with Barred Owls, and habitat loss due to wildfire were identified as current threats; West Nile Virus and Sudden Oak Death were identified as potential new threats. Complex interactions are likely among the various factors. This information has not been found to be in conflict with the NWFP or the RMP (*Evaluation of the Salem District Resource Management Plan Relative to Four Northern Spotted Owl Reports, September 6, 2005*).



## Aquatic Conservation Strategy Update

On March 30, 2007, the District Court, Western District of Washington, ruled adverse to the US Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA-Fisheries) and USFS and BLM (Agencies) in *Pacific Coast Fed. of Fishermen's Assn. et al v. Natl. Marine Fisheries Service, et al and American Forest Resource Council*, Civ. No. 04-1299RSM (W.D. Wash)( PCFFA IV). Based on violations of the Endangered Species Act (ESA) and the National Environmental Policy Act (NEPA), the Court set aside:

1. the USFWS Biological Opinion (March 18, 2004 ),
2. the NOAA-Fisheries Biological Opinion for the ACS Amendment (March 19, 2004),
3. the ACS Amendment Final Supplemental Environmental Impact Statement (FSEIS) (October 2003), and
4. the ACS Amendment adopted by the Record of Decision dated March 22, 2004.

Previously, in *Pacific Coast Fed. Of Fishermen's Assn. v. Natl. Marine Fisheries Service*, 265 F.3d 1028 (9th Cir. 2001) (*PCFFA II*), the United States Court of Appeals for the Ninth Circuit ruled that because the evaluation of a project's consistency with the long-term, watershed level ACS objectives could overlook short-term, site-scale effects that could have serious consequences to a listed species, these short-term, site-scale effects must be considered.

The following paragraphs show how the Round Mountain thinning project meets the Aquatic Conservation Strategy in the context of PCFFA IV and PCFFA II.

### *Existing Watershed Condition*

The Round Mountain Thinning project area is in the Hamilton and Crabtree watersheds.

Twenty-six percent of the **Hamilton Creek watershed** is managed by BLM, 70 % is private industrial forest, 3% is private agricultural / residential land, and 1% is managed by the state of Oregon (Hamilton Creek Analysis (WA) p.16). Currently, approximately 6 percent of the federal ownership in all land allocations within Hamilton Creek appears to exhibit late-successional characteristics (WA p.5). Most of the forest stands within the watershed are 35 to 74 year old. Less than 1 percent of the watershed is in old-growth stands over 200 years of age (WA p. 30).

Across all ownerships, 62% percent of Hamilton Creek watershed consists of closed sapling pole stands between 35 and 74 years of age. On non -federally owned lands within the Hamilton Creek watershed, this age class comprises approximately 50 percent of the land base. Twenty (20) percent of the land base consists of open to closed sapling stands 15-34 years of age.

Of the 193 estimated stream miles in the landscape, 51 miles (26 percent) are managed by BLM. Approximately 56 percent of the BLM ownership in the Hamilton Creek Watershed falls within Riparian Reserves. Age class distribution within the Riparian Reserve buffers is similar to the age class distribution on BLM across the Watershed. Currently, about 6 percent of the Riparian Reserve buffers are in age classes over 80 years of age and approximate late successional forest conditions. The majority (60 percent) of the Riparian Reserve buffers are in closed sapling pole seral stage between 35and 75 years of age. About 34 percent are in stands under 35 years of age. Hardwood forest types on both BLM and other ownerships comprise a much larger proportion of the streamside types than the average across the Watershed (WA p. 35).

Eighteen percent of the **Crabtree Creek watershed** is managed by BLM, 38% is private industrial forest, 42% is private agricultural / residential land, and 2% is managed by the state of Oregon (Crabtree Creek Analysis (WA) p.Ch.2 Pg. 8). Currently, approximately 37 % of the federal ownership in all land allocations within Crabtree Creek appears to exhibit late-successional characteristics (WA Ch.2 Pg.9). Most of the forest stands within the watershed are 40 to 80 year old. Eleven percent of the watershed is in old-growth stands over 200 years of age (WA Ch.5 Pg.6).

On non-federally owned lands within the Crabtree creek watershed 28% of the landscape are closed sapling pole stands between 40 and 80 years of age. Thirteen percent of the landscape is open sapling/brush, 10 to 40 years of age.

Riparian Reserves: Age class distribution within the Riparian Reserve buffers is similar to the age class distribution on BLM across the Watershed. Currently, approximately 37 % of the federal ownership in all land allocations within Crabtree Creek appears to exhibit late-successional characteristics (WA Ch.2 Pg.9). Most of the forest stands within the watershed are 40 to 80 year old. Eleven percent of the watershed is in old-growth stands over 200 years of age (WA Ch.5 Pg.6).

#### ***Review of Aquatic Conservation Strategy Compliance:***

I have reviewed this analysis and have determined that the project complies with the ACS on the project (site) scale. The following is an update of how this project complies with the four components of the Aquatic Conservation Strategy, originally documented in the EA, Table 16, p. 50. The project will comply with:

- ***Component 1 – Riparian Reserves:*** by maintaining canopy cover along all streams and the wetlands, which would protect stream bank stability and water temperature. Riparian Reserve boundaries are established consistent with direction from the *Salem District Resource Management Plan* (p. 10). No new road construction would take place with the Riparian Reserve LUA.
- ***Component 2 – Key Watershed:*** by establishing that the Round Mountain Thinning project is not within a Key watershed.
- ***Component 3 – Watershed Analysis:*** The Hamilton Creek Watershed Analysis was completed in 1995 and the Crabtree Creek Watershed Analysis was completed in 2001. The following Watershed Analysis recommendations apply to the Selected Action.

#### **Hamilton Creek Watershed Analysis**

- *Manage stands within the GFMA on a rotation to Culmination of Mean Annual Increment (CMAI) in conformance with the PRMP (RMP) (WA p.66). Thinning in the GFMA (Matrix) portion of the thinning units is an intermediate step toward a rotation to CMAI (RMP p. 48).*
- *Utilizing fire for fuels management treatments generally limited to prescribed understory burning and pile burning in conjunction with commercial thinning (WA p.67).*

Pile burning is included in the Selected Action. Understory burning (broadcast) was not proposed or selected. Mechanical fuels treatments (“mastication” or pile and burn) would be used for fuel treatments in selected areas adjacent to open roads and in the WUI. These treatments are expected to result in reduced hazard of wildfire (EA p. 47, DR **section 7.0**, p. 16).

- GFMA(LUA): *Implement intensive management treatments such as pre-commercial thinning, post and pole removal, fertilization, pruning, commercial thinning where management emphasis is primarily timber production* (WA p.74). The Selected Action will implement commercial thinning within the GFMA LUA (DR p. 3).
- Connectivity/Diversity (LUA): *Use density management to attain late-successional structure within stands by variable density thinnings. C/D density management opportunities have been identified in T. 12 S., R. 1 E., Sec. 3* (WA p.74). Variable density thinning will take place within T. 12 S., R. 1 E., Sec. 3 (DR p. 3).
- Fisheries: *Improve the tree size and species mix in riparian areas which presently have small diameter conifers or are dominated by hardwood species. Silvicultural practices that could be considered include thinnings in conifer stands* (WA p.76). See Connectivity, above.

#### **Crabtree Watershed Analysis**

- Additional Criteria for Density Management/Thinnings (Ch. 7 Pg. 6) within Connectivity and Riparian LUAs
  - *Maintain average 40 to 50 percent crown closures.*
  - *These projects can best be implemented through commercial timber sales. Logs may be removed provided standing dead/down CWD recruitment goals and ACS objectives are met.*
  - *In stands where late successional characteristics are lacking, treatment to create structure and/or reduce high stocking levels could occur.*  
The Selected Action will retain 40-50% canopy closure, implement a timber sale, and reduce stocking levels (EA pp. 15, 106, DR p. 3).
- Noxious Weeds (Finding #7): *Use the principles of integrated weed management to eradicate, control, and prevent the spread of established and new invader noxious weed infestations.*
  - *Encourage washing of ground disturbing equipment from off site to limit the spread of all exotic and noxious weed species. Ch. 7 Pg. 10.* The Selected Action implements this feature (EA p. 19, DR **section 10.0**, p. 24)
- Riparian Condition and LWD (Findings #1 and 2) on federal lands:
  - *Actively manage Riparian Reserves to achieve Aquatic Conservation Strategy Objectives on BLM lands. Plan and implement riparian silvicultural projects designed to accelerate growth of riparian conifers to improve potential for LWD recruitment on BLM lands. Criteria for treatment are included under Recommendation #1, of the Terrestrial Section. Activities could include planting, density management, thinning, road decommissioning, and erosion control in Riparian Reserves, such as seeding or planting. Ch. 7 Pg. 14.* The Selected Action implements thinning, see above.

- **Component 4 – Watershed Restoration:** Thinning in the Riparian Reserve land use allocation would be expected to result in long-term restoration of large conifers and the potential for material that would contribute to in-stream habitat complexity in the long-term.

In addition I have reviewed this project against the ACS objectives at the project or site scale with the following results: The no action alternative does not retard or prevent the attainment of ACS objectives 1-9 because this alternative will maintain current conditions. The Selected Action does not retard or prevent the attainment of ACS objectives 1-9 for the reasons stated in the following paragraphs:

- **ACS Objective (ACSO) 1 - Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted:** The proposed thinning would not prevent the attainment of this objective. The proposed thinning in portions of the Riparian Reserve Land Use Allocation (Riparian Reserves) would result in forest stands that exhibit attributes typically associated with stands of a more advanced age and stand structural development (larger trees, a more developed understory, and an increase in the number, size and quality of snags and down logs) sooner than would result from the No Action Alternative (EA pp. 27, 41-44, 96).
- **ACSO 2 – Maintain and restore spatial and temporal connectivity within and between watersheds:** The proposed thinning would not prevent the attainment of this objective. Implementation of the Selected Action will not eliminate connectivity between project units or adjacent untreated stands under BLM management due to the Selected Action's enhancement of stand structure development within Riparian Reserves. See ACSO1.
- **ACSO 3 - Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations:** The proposed thinning would not prevent the attainment of this objective (EA pp. 31-34). Under the Selected Action there would be no direct alteration of any stream channel, wetland or pond morphological feature. All operations, equipment and disturbances would be at least 60 feet from all wetlands and perennial stream channels (and 25 feet from intermittent stream channels) Refer to *Sec. 2.2.2 Project Design Features* common to all project areas (EA p. 32)
- **ACSO 4 - Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems:** The proposed thinning would not prevent the attainment of this objective (EA pp. 31-34). Stream Protection Zones (SPZs) in Riparian Reserves would be maintained. The proposed temporary road for the Selected Action is on a ridge top with no hydrologic connections. The Selected Action would be unlikely to have any measurable effect on stream temperatures, pH, or dissolved oxygen. Sediment transport and turbidity within the project area is likely to increase over the short term as a direct result of timber hauling and road maintenance on existing roads within the Riparian Reserve LUA. Over the long-term (beyond 3-5 years), current conditions and trends in turbidity and sediment yield would return to pre-project levels (EA pp. 32, 33).

- **ACSO 5 - Maintain and restore the sediment regime under which aquatic ecosystems evolved:** The proposed thinning would not prevent the attainment of this objective (EA pp. 31-34). See ACSO 4. In addition, tree removal, road renovation and construction will not occur on steep unstable slopes where the potential for mass wasting adjacent to stream reaches is greatest. Therefore, increases in sediment delivery to streams due to mass wasting are unlikely to result from this action.

Implementing Best Management Practices (BMP) for thinning, yarding, hauling, culvert replacement and road design and use will reduce the potential for detectable sediment delivery to streams as a result of operations. Examples include stream and road buffers, minimum road widths, minimal excavation, ensuring appropriate drainage from road sites, and seasonal limitations on road use and ground-based harvest operations (RMP Appendix C, pp. C-1 to C-9) (EA pp. 18-21) would further reduce the potential for detectable sediment delivery to streams.

- **ACSO 6 – Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing:** The proposed thinning would not prevent the attainment of this objective (EA pp. 31-34).

*Ground Water:* It is unlikely the proposal will result in any detectable change to local ground water. The proposal will remove less than half the existing forest cover in Riparian Reserve and less than 60 percent in the Matrix portions of the harvest area, and the root systems of the conifers retained will quickly exploit any additional soil moisture availability. Proposed road construction will not involve excavation into side slopes where water tables could be intercepted.

*Base Flow:* It is unlikely the proposal will result in any detectable change to local base flow, because the proposed project will remove approximately half the existing forest cover, so that the root systems of the conifers retained will quickly exploit any additional soil moisture availability.

*Peak flow effects from harvest:* Since portions of the project area are in a zone subject to transient snow accumulations in the winter, it can be assumed that the reduction in stand density may result in some small increase in snow accumulation and melting during rain-on-snow (ROS) events. However, due to the small area considered in this action, this effect is not likely to result in detectable changes to peak flows in these watersheds.

*Peak flow effects from new road construction:* New road construction under the proposed action will be limited to stable slopes and will not require extensive full-bench or cut-and-fill construction. This is unlikely to have a detectable effect on peak flows because there will be no interception of surface or ground water with delivery to streams.

*Peak flow effects from roads:* All but 0.2 mile of the roads that will be utilized under this proposal already exist. This proposal will not alter these roads in a way that will likely reduce or increase any existing effect to peak flows attributable to the current road network, and thus, it will maintain the current condition and trends relative to hydrology and stream flow associated with existing roads.

- **ACSO 7 - Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands:** The proposed thinning would not prevent the attainment of this objective. There would be no alteration of any stream channel, wetland or pond morphological feature. All operations, equipment and disturbances are kept a minimum of 60 feet from all wetlands and perennial stream channels, and 25 feet from all intermittent stream channels. Thus, the current condition of floodplain inundation and water tables would be maintained (EA p. 131).
- **ACSO 8 – Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability:** The proposed thinning would not prevent the attainment of this objective. See ACSO 1. SPZs would maintain structural diversity of plant communities in riparian areas and wetlands from 25 feet (intermittent streams) to 60 feet (perennial streams) in treatment areas. Thinning in Riparian Reserve LUA outside of the SPZs would help to restore species composition by allowing more understory development and structural diversity by creating horizontal and vertical variations that are currently lacking in the riparian treatment areas (EA p. 27).
- **ACSO 9 - Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species:** The proposed thinning would not prevent the attainment of this objective. See ACSO 1. The Selected Action would have no adverse effect on riparian dependent species. Although thinning activities may affect invertebrates within the treatment areas, adjacent non-thinned areas should provide adequate refugia for the species (see DR Maps 1, 2). In the long term (10- 20 years), the treatments would restore elements of structural diversity to treatment areas in Riparian Reserves. These attributes would help to provide resources currently lacking or of low quality, and over the long-term, would benefit both aquatic and terrestrial species (EA p. 27, 28).

## 6.0 Public Involvement/ Consultation/Coordination

### Scoping

A description of the proposal was included in the Salem Bureau of Land Management Project Update which was mailed to more than 1,000 addresses. A letter asking for scoping input on the proposal was mailed on January 2, 2005 to adjacent landowners and individuals who expressed an interest in management activities in the resource area as a whole or in this area.

Letters were also sent to the Confederated Tribes of Grande Ronde; Confederated Tribes of the Warm Springs Reservation of Oregon; Federal, State, County and local government organizations; and Special Interest groups.

### **Comment Period and Comments**

The FY 2006 Timber Sale Thinning EA was mailed to agencies, individuals and organizations. Legal notices were placed in the Molalla Pioneer, Stayton Mail and Albany Democrat Herald newspapers, soliciting public input on the actions, from July 20, 2005 to August 19, 2005. Responses to public comments can be found in DR **section 12.0**, pp. 26-33.

### **ESA Section 7 Consultation**

1. *US Fish and Wildlife Service*: The Round Mountain Thinning project was submitted for ESA Section 7 Consultation during the FY2007/2008 consultation process. *The batched biological assessment for projects with the potential to modify the habitat of the Northern Spotted Owl, Willamette Province, FY 2007-2008 (BA)*, was submitted in July 2006. Using effect determination guidelines, the BA concluded that overall, the Round Mountain Thinning project may affect, but is not likely to adversely affect the Northern Spotted Owl due to the modification of dispersal habitat (BA, pp. 40-41, 44-45).

The Letter of Concurrence (LOC) associated with these thinning was issued in September 2006 (reference #1-7-06-I-0192). The LOC concurred that these thinning may effect, but are not likely to adversely affect spotted owls (p.39). None of the proposed units are located in Critical Habitat for the Northern Spotted Owl.

The proposed thinning and connected actions described in the EA have incorporated the applicable management standards that were described in the BA (p.10) and LOC (Section 1.2, p.19). In addition, this project would be in compliance with the general standards set forth in the BA (p.6) and the LOC (p.18), including monitoring and reporting on the implementation of this project and any adverse effects. There will be a seasonal restriction from March 1 to July 15 critical nesting period on Units 1, 2, 3 and 4, unless the habitat is known to be unoccupied or there is no nesting activity, as determined by surveys (LOC p.19). The general seasonal restrictions for bark slippage and soil moisture coincide with the critical nesting season, effectively delaying disturbance activities until later into the nesting season and providing opportunities to survey for the presence of spotted owls and implementing further restrictions on operations if needed (EA pp.18, 21).

2. *NOAA Fisheries (NMFS)*: For action alternatives that would have “no effect” on UWR steelhead trout, UWR Chinook salmon, or LCR Steelhead trout. Consultation with NOAA Fisheries is not required for projects with a “no effect” call. Potential effects of the thinning and connected actions on the listed fish species are related to sediment inputs associated with road construction/ decommissioning and culvert replacement/removal. The Selected Action incorporates very little road construction (0.2 mile, none with hydrologic connectivity) and culvert replacement would take place only in low/no flow seasons. The 60’ stream protection zones on perennial streams and 25’ on intermittent stream channels are expected to prevent any decrease in stream shade that could result in an increase in stream temperature.

The determination of “no effect” is based on the distances from proposed project units to ESA listed fish habitat and on the factors stated above that would prevent increases in sediment input, stream turbidity or temperature to stream reaches potentially occupied by ESA listed fish species (EA p.94).

## 7.0 Conclusion

### **Review of Finding of No Significant Impact**

I have determined that change to the Findings of No Significant Impact (FONSI – EA pp. 2-6) covering the Round Mountain Thinning Timber Sale is not necessary because I've considered and concur with information in the EA and FONSI and this Decision Rationale. The comments on the EA were reviewed and no new information was provided in the comments that lead me to believe the analysis, data or conclusions are in error or that the Selected Action needs to be altered. The Selected Action would not have effects beyond those already anticipated and addressed in the RMP EIS.

Supplemental or additional information to the analysis in the RMP/FEIS in the form of a new environmental impact statement is not needed for the reasons described in the Finding of No Significant Impact (EA p. 3) and in the following paragraphs. Effects of the Selected Action are similar to or less than the effects described in the EA due to fewer acres being thinned, the beneficial effects of additional fuel treatments, and road work within the scope of the EA proposed action. The following describes the changes in effects between the EA proposed action and the Selected Action.

- a. *Fuel Treatments:* These fuel treatments are in support of the Linn County Community Wildfire Protection Plan (CWPP). One of the goals of this plan is the coordination of fuels projects. The Lacombe area was identified and ODF has applied for a grant to provide assistance to individual private landowners to reduce fuel hazards on their land. These 12 acres would be the closest acres to that planning area. Within the fuel treatment area, cleaning up the down surface fuels on 12 acres will reduce the potential of rapid fire spread through these acres and also create an area where a surface fire could be more easily suppressed.

Piling and burning would result in small areas of burnt ground which would recover within 1 year since piles would be burnt in the fall after vegetation is thoroughly wet. The impact to mycorrhizae is considered small since the impact area is small enough that mycorrhizal regrowth can take place within a short timeframe (1-5 years) and the impacted area should have no effect on the trees which are left after the thinning. Burning also results in a small impact to air quality. Since the burning is done in the fall when conditions are favorable under Smoke Management Guidelines, the impact is reduced.

Mastication would leave the fine fuels on the ground which would decompose quickly (1-3 years).

- b. *Right-of-way clearing:* Right-of –way clearing would have the same effect as the road construction since it occurs within the same area. The area would shift from 1 acre of 60 year old forest to 1 acre cleared of vegetation for the life of the timber sale (1 – 4 years). After the completion of logging operations, vegetation would be re-established with native seed. Past right-of-way clearings associated with thinning timber sales within the area have shown natural reforestation of disturbed sites within approximately 2-10 years after the completion of a timber sale.



- c. *Dropping EA unit 33d*: Effects associated with this unit are described in the EA No Action Alternative. There will be no adverse effects to dropping this unit because the stand is not ready to thin at this time.
- d. *Shifting of unit boundaries in Units 3(EA unit RM3C) and Unit 4 (EA Unit RM3D)*: Effects would remain the same because:
- The forest types within the units remain the same (DR maps 3 and 4).
  - In Unit 3 the land use allocation remains the same and in Unit 4, there will be a reduction in thinning within the Riparian Reserve land use allocation.
  - The overall sizes of the Selected Action units are similar to the EA unit (DR Map 2).
  - Connected actions associated with the thinning, road work, timber haul, fuel treatments, would remain the same as with the EA Proposed Action.
  - See DR **section 8.0**, p. 18.
- e. *Deferring clumps and gaps within Riparian and Connectivity LUAs*. See DR **section 4.0**, p. 7.

#### **Administrative Review Opportunities**

The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR 5003, protests of this decision may be made within 15 days of the publication of a notice of decision in a newspaper of general circulation. This notice of decision will be published in the *Albany Democrat Herald* newspaper on April 30, 2008. To protest this decision a person must submit a written protest to Cindy Enstrom, Cascade Field Manager, 1717 Fabry Rd SE, Salem, Oregon 97306 by the close of business (4:00 p.m.) on May 15, 2008. The planned sale date is May 28, 2008.

The protest must clearly and concisely state the reasons why the decision is believed to be in error. Any objection to the project design or my decision to go forward with this project must be filed at this time in accordance with the protest process outlined above. If a timely protest is received, this decision will be reconsidered in light of the statements of reasons for the protest and other pertinent information available and shall serve a decision in writing on the protesting party (43 CFR 5003.3).

#### **Implementation**

If no protest is received within 15 days after publication of this Decision Record (Round Mountain Thinning Timber Sale DR) this decision will become final. For additional information, contact Carolyn Sands (503) 315-5973 or Rudy Hefter (503) 375-5671, Cascades Resource Area, Salem BLM, 1717 Fabry Road SE, Salem, Oregon 97306.

Approved by: Cindy Enstrom  
Cindy Enstrom  
Cascades Resource Area Field Manager

4/29/2008  
Date

## 8.0 Comparison of the Selected Action with the EA Proposed Action

The Selected Action implements units RM33b, RM 3a, RM 3c, and RM 3d of the EA proposed action (EA pp. 104). Twenty three acres were dropped from the proposed action in the GFMA and 15 acres were dropped from the Riparian LUA (DR table 3). This acreage change was due to shifts in unit boundaries, based on final unit layout that was recorded with a GPS mapping system.

After the final layout of units for the timber sale:

- Selected Unit 3 (RM3C) shifted to the west (DR map 2), yet remains in the same timber type as the original EA unit RM3, see DR Map 3. This timber stand has a “birth date” of 1950, which makes it 58 years old.
- Selected Unit 3 (RM3C) shifted to the north and west (DR map 2), yet remains in the same timber type as the original EA unit RM3, see DR Map 4. This timber stand has a “birth date” of 1968, which makes it 40 years old.

Canopy closure descriptions remain the same as in the EA proposed action.

See DR sections 2.0-4.0, and 7.0, pp. 3-7, 16-17.

DR Tables 3 and 4 compare the EA Proposed Action and the Selected Action.

**Table 3: Crossover Table between EA Units and Selected Action Units**

Legal T-R-S	EA Unit #	Selected Action Unit #	Acres					
			EA <sup>1</sup>			Selected Action <sup>2</sup>		
			Total	Matrix	Riparian Reserve	Total	Matrix	Riparian Reserve
12S-1E-Sec3	RM3A	2	195	166	29	143	129	14
	RM 3C	3						
	RM 3D	4						
11S-1E-Sec33	RM 33B	1						

<sup>1</sup> Preliminary mapping used for EA analysis by the Interdisciplinary Team (IDT) is based on information in the GIS data base and initial reconnaissance.

<sup>2</sup> The Selected Action units are based on final unit boundary layout based on further field reconnaissance. Selected acres have been computed using Global Positioning System surveys of actual treatment boundaries. Matrix acres include the road right-of-way acres.

**Table 4: Comparison of the Selected Action with the EA Proposed Action by Action**

Action			EA Proposed Action	Selected Action
Timber Harvest (Acres)	Commercial Thinning	General Forest Management Area	166	61
		Connectivity <sup>1</sup>	0	67
		Matrix Land Use Allocation	166	<b>128</b>
		Riparian Reserve Land Use Allocation	29	<b>14</b>
	Road Right of way clearing <sup>2</sup>		1	<b>1</b>
	Total Acres of Timber Harvest		195	<b>143</b>
Logging System	Ground-Based - Skidding		143	<b>107</b>

Action			EA Proposed Action	Selected Action
(Acres)	Skyline – Uphill, One-end suspension		52	36
Road Work	Road Access	New road construction (miles)	0.2	0.2
		Road Renovation/ Road Maintenance (miles)	12.2	4.6
	Road Stabilization/ Blocking	New road construction (miles)	0.2	0.2
		Trench and berm road blocks (#) on road 11-1E-33.1	1	1
Fuels Treatments (Acres)	Pile Burning (hand pile and machine pile)		0	12

<sup>1</sup>T. 11S. R. 1E. section 33 is within the GFMA LUA. T. 12S. R1E. section 3 is within the Connectivity LUA. This was the case at the time of the EA's release and is a correction of the EA that described in 166 acres of Matrix to be within the GFMA LUA.

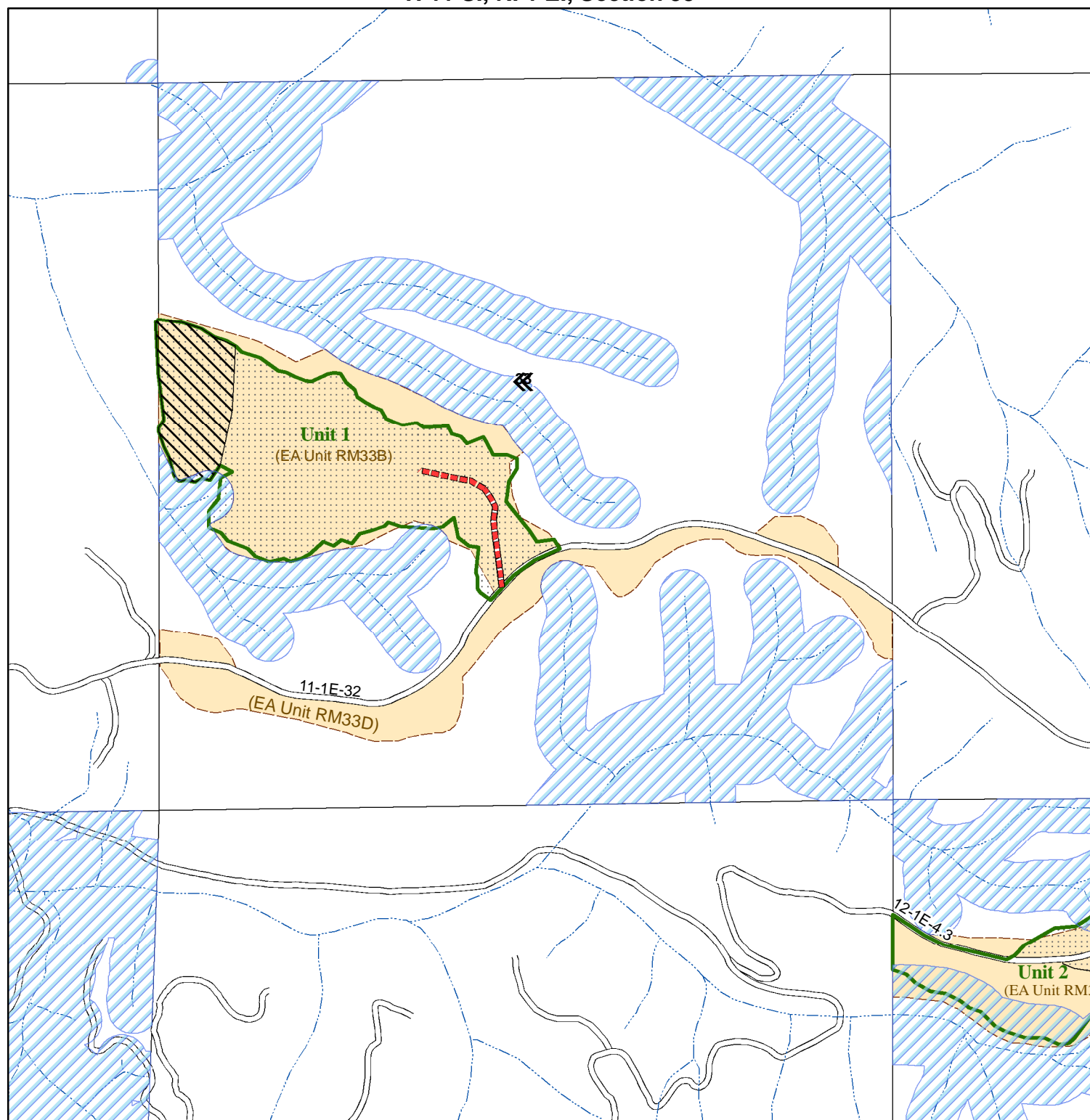
<sup>2</sup> The right-of-way clearing was not described in the EA. However a right-of-way is timber sale contract standard for all new road construction.

## 9.0 Maps

Maps of the Selected Action (DR Maps 1 and 2) are shown on pages 20 and 21. DR Maps 3 and 4 Maps of stand ages (DR Maps 3 and 4) are shown on pages 22 and 23.

# Round Mountain Thinning Selected Action

T. 11 S., R. 1 E., Section 33



United States Department of the Interior  
Bureau of Land Management  
Salem District Office  
Cascades Resource Area  
1717 Fabry Road S.E.  
Salem, Oregon 97306

3

1,000 500 0 1,000 Feet

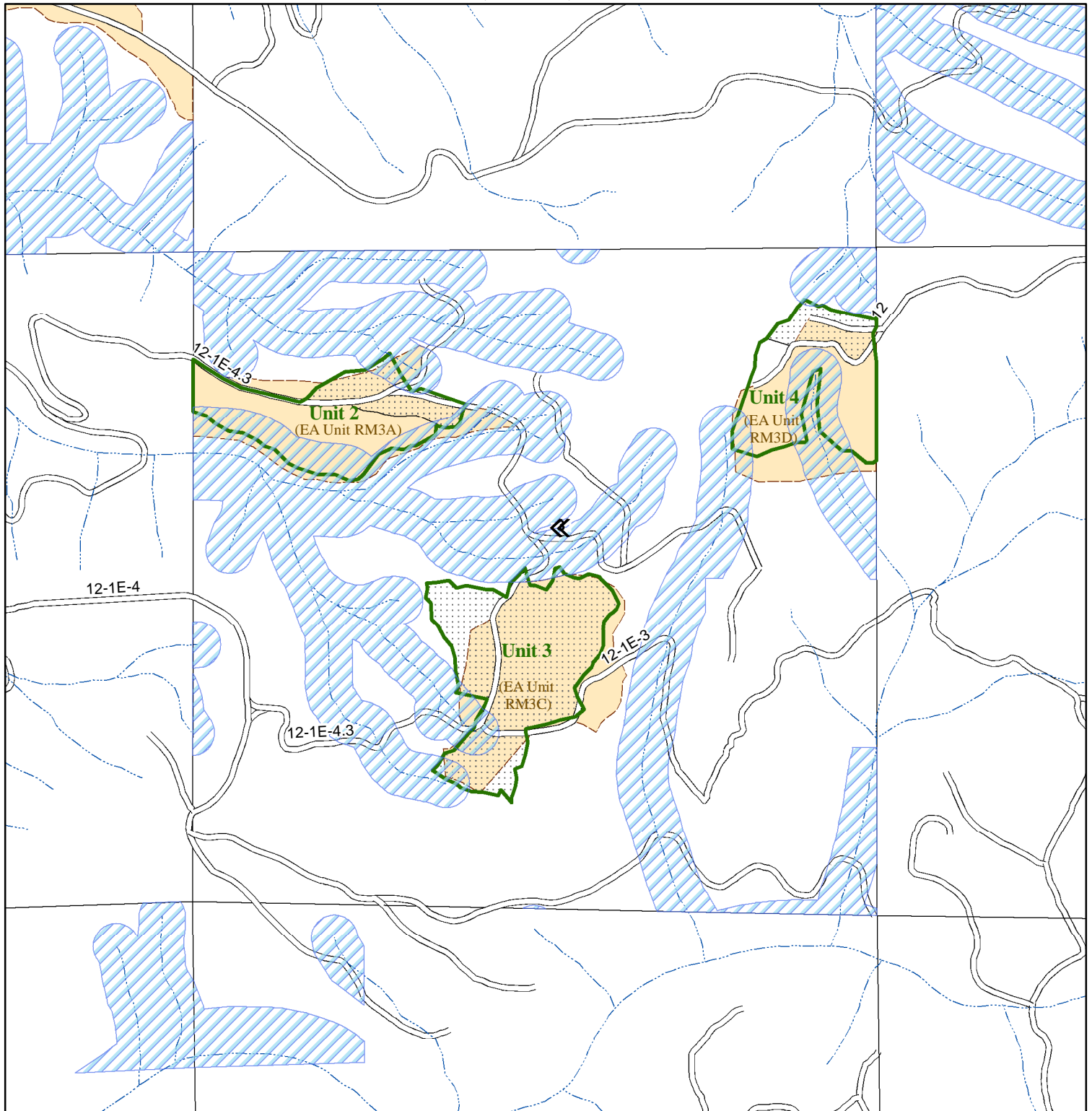
April 28, 2008

- Selected Action Units
- Ground Based Yarding
- Skyline Yarding
- EA Proposed Action Units
- Fuel Treatment Area
- Right-of-Way, Road to be Constructed
- Existing Road
- Stream
- Federal Riparian Reserve

The Bureau of Land Management does not warrant the accuracy, reliability, or suitability of this information for individual or aggregate use with other data for a particular purpose. The accuracy of the data and map product may vary due to compilation from various sources, and may not meet National Map Accuracy Standards of the Office of Management and Budget. This product was developed through digital means and may be updated, corrected, or otherwise modified without notification.

# Round Mountain Thinning Selected Action

T. 12 S., R. 1 E., Section 3



United States Department of the Interior  
Bureau of Land Management  
Salem District Office  
Cascades Resource Area  
1717 Fabry Road S.E.  
Salem, Oregon 97306

3

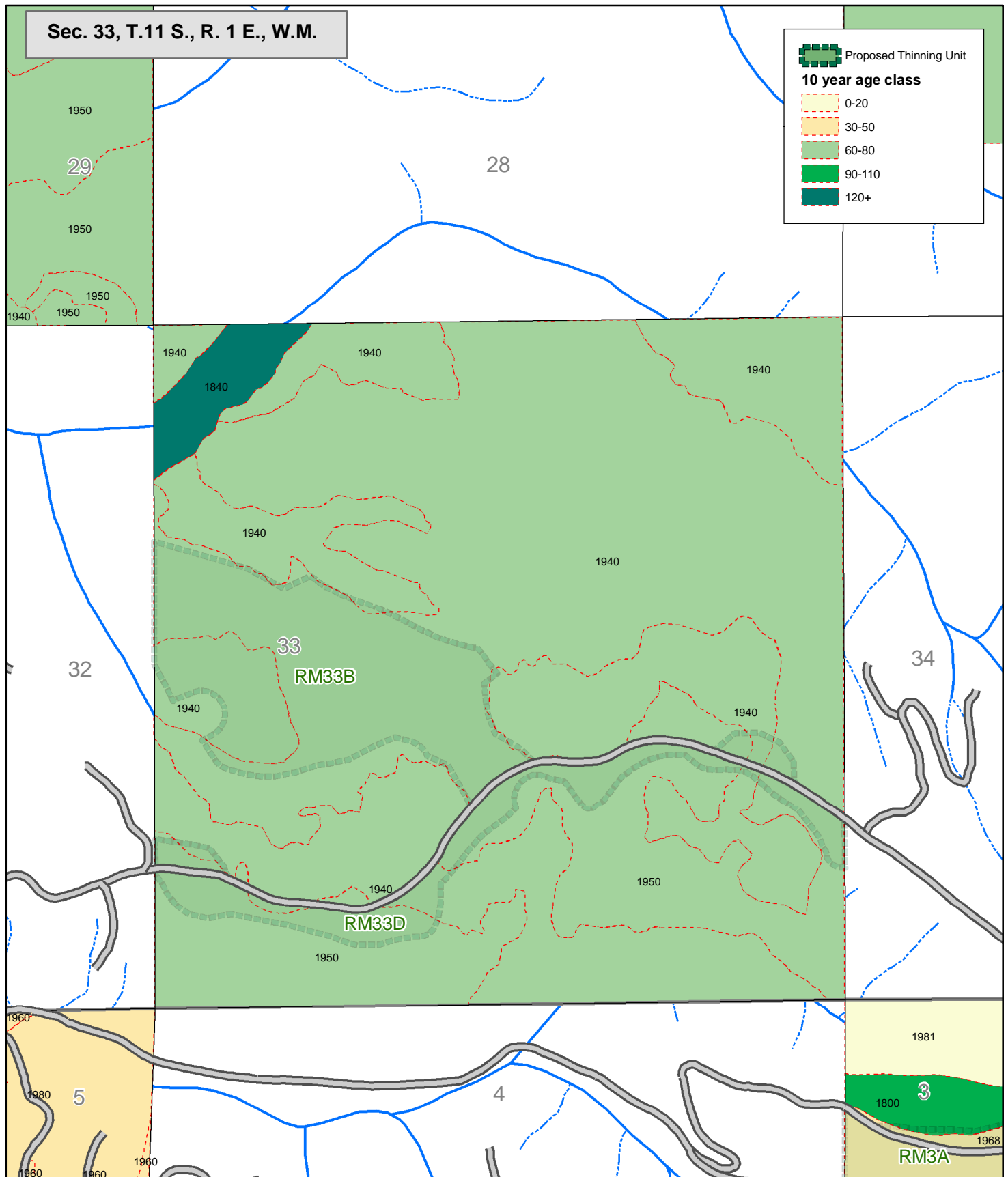
1,000 500 0 1,000 Feet

April 28, 2008

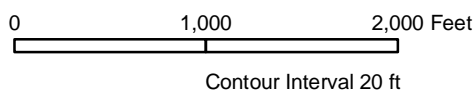
- Selected Action Units
- Ground Based Yarding
- Skyline Yarding
- EA Proposed Action Units
- Fuel Treatment Area
- Right-of-Way, Road to be Constructed
- Existing Road
- Stream
- Federal Riparian Reserve

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# Round Mountain Stand Age Map



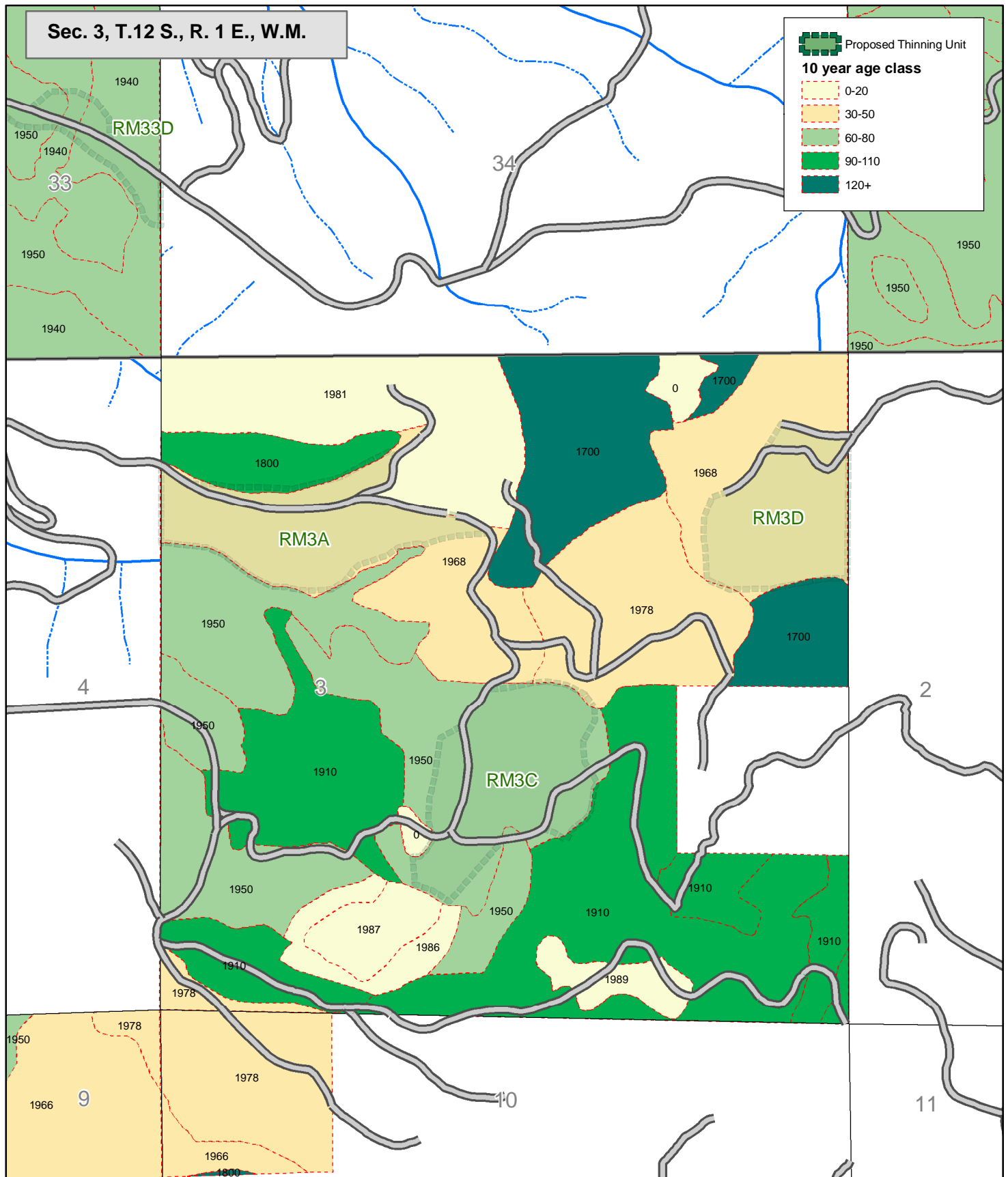
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This product was developed through digital means and may be updated without notification.



SDowlan 05292006



# Round Mountain Project Stand Age Map



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This product was developed through digital means and may be updated without notification.

0 1,000 2,000 Feet  
Contour Interval 20 ft



SDowlan 05292006

## 10.0 Project Design Features

This section describes the project design features that apply to the Selected Action. Where the design feature is identical to the design feature prescribed in the EAs, the EA reference is provided. Project design features for the EA proposed actions and alternatives are described in EA *section 2.2.3*, EA pp. 18-21 and EA *section 8.1.2.1* (EA pp. 92). Design features are organized by resource management objectives.

1. **Soil Productivity:** Design features described in the EA apply to the Selected Action. Examples include: a) using currently available equipment and practices that limit soil compaction to less than 10 percent of the area and minimize soil disturbance and erosion potential; b) preventing erosion by logging design, practices and post harvest treatment of disturbed areas; c) limiting ground based operations to relatively dry soil conditions; d) limiting new skid trails to slopes less than 35 percent; e) burning piles when soils are wet and less susceptible to heat damage.
2. **To protect hydrologic functions, aquatic habitat and fisheries:** Design features described in the EA apply to the Selected Action. Examples include: a) maintaining areas of undisturbed vegetation between streams and harvest areas, also known as stream protection zones (SPZ); b) constructing, improving, renovating and stabilizing roads during dry conditions; c) stabilizing, and controlling access to all new roads upon project completion; d) placing erosion control measures on roads left open over the winter; e) restricting hauling to times and road conditions to reduce the risk of sediment entering streams.
3. **To protect and enhance the residual stand, stand diversity, and wildlife habitat components:** Design features described in the EA apply to the Selected Action. Examples include: a) retaining old growth, snags, minor conifer tree species, hardwoods, and most cull and deformed trees; b) retaining existing CWD intact whenever feasible; c) maintaining minimum canopy closures of 40 percent in Matrix and 50 percent in Riparian Reserve; d) restricting operations during the spring growing season when the bark of retained trees is easily damaged.
4. **To protect against expansion of invasive and non-native plant species:** Design features described in the EA apply to the Selected Action. Examples include: a) cleaning equipment to prevent importing off-site plants; b) using only native species seed and sterile mulch to stabilize disturbed soil.
5. **To minimize disturbance to BLM Special Status Species and other Species of Concern:**  
*Northern Spotted owl:* The following is an update of the seasonal restriction on the northern spotted owl. There will be a seasonal restriction from March 1 to July 15 (critical nesting period) on Units 1, 2, 3 and 4 on habitat modification activities (felling, yarding, and road building) to minimize the risk of disturbance to spotted owls. The seasonal restriction can be waived if surveys indicate no presence of nesting spotted owls within disturbance range (0.25 to 0.5 miles) of the units (EA p. 92, DR p. 15).

*Other:* Design features described in the EA apply to the Selected Action. Examples include: shutting down or restricting operations after finding plant or animal populations that require protection.



6. **To reduce fire hazard risk and protect air quality:** Design features described in the EA apply to the Selected Action. Examples include: a) treating activity fuels (woody debris that could contribute to fire spread) adjacent to property lines in Rural/Urban Interface areas; b) burning in compliance with the Oregon State Smoke Management Plan; c) closing or gating roads to reduce fire risk on a site-specific basis.
7. **To protect cultural resources:** Design features described in the EA apply to the Selected Action. Examples include: shutting down or restricting operations after finding cultural resources that require protection.
8. **Summary of seasonal restrictions and permitted operational periods:** Seasonal restrictions described in the EA (p.94) apply to the Selected Action. Examples include: a) restricting falling and yarding during the bark slippage period; b) restricting tractor operations to avoid soil damage; c) restricting road construction and renovation to dry conditions as an erosion control measure and to avoid soil damage adjacent to the road.

## 11.0 Response to EA Comments

The FY 2006 Timber Sale Thinning EA was mailed to agencies, individuals and organizations. Legal notices were placed in the Molalla Pioneer, Stayton Mail and Albany Democrat Herald newspapers, soliciting public input on the actions, from July 20, 2005 to August 19, 2005. No comment letters were received specific to the Round Mountain timber sale. However the EA covered four project areas. The following comments are on the portion of the EA addressing effects common to all project areas. The major concerns raised in the comments have been consolidated and summarized.

### 1.1.1 Aquatic Systems, Hydrology, Riparian Reserves, Fisheries

1. *The EA p 14 description of the purpose of riparian reserves fails to account of the need to maintain the current functionality of riparian and aquatic systems. One of your evaluation criteria should be whether any short-term degradation of ACS objectives is off-set by long-term benefits brought about by the proposed action. Some fear thinning will increase the risk of premature landsliding while the trees are still small, and end up delivering fewer and smaller trees than if left unthinned. Others think the increase risk of slides from partial removal is minimal and these are an area where thinning should be targeted. Please discuss this question in the NEPA analysis. (ONRC) The impacts of this (sedimentation, mass wasting, habitat for an array of species, including Special Status Species) were not fully disclosed (in RR treatments). (Bark) Steep slope area(s) should be deferred because they are “potentially unstable” and should be included in the riparian reserve system. (ONRC)*

**Response to #1:** The EA shows that the proposed action maintains current functionality of riparian and aquatic systems by retaining shade on streams, retaining 50% canopy closure within riparian reserves (EA p.15), maintaining owl dispersal habitat (EA p. 5), retaining a forest environment (photos 1-4, EA p. 28), maintaining water temperatures, physical integrity of the stream channels, stream flows (EA p. 30-31). Results from previous thinnings have shown an increase in tree diameters because of more spacing as a result of thinning. More space between trees allows the remaining trees more room to grow and results in an overall increase in tree diameters over the next 20 years.

The ACS objectives were examined at the site scale (DR pp. 12-14) and based on that evaluation the level of short term degradation would be off-set by long term benefits brought on by the proposed action because thinning near or adjacent to perennial streams is not expected to have adverse effects on the water quality and aquatic habitat within those streams. All perennial streams have Stream Protection Zones (SPZ) of a minimum of 60' width, generally wider, to ecological or slope breaks. Near-stream ground disturbance would be at such a minor level that the undisturbed vegetation in the SPZ is expected to absorb any sediment generated. Based on the location of the new road proposed for construction, none have the potential to intersect stream channels or cause stream sedimentation.

In addition, *EA Section 14.2.1* discusses that dry season hauling would minimize sediment entering streams. Therefore it is unlikely that this proposal would lead to a measurable change in sediment regime, including increases in sediment delivery to streams, stream turbidity, or the alteration of stream substrate composition or sediment transport regime.

*EA section 3.2.2* states that tree removal, and road renovation and construction would not occur on steep unstable slopes where the potential for mass wasting adjacent to stream reaches is high. Therefore, increases in sediment delivery to streams due to mass wasting are unlikely to result from these actions.

2. Design Features: *The agency cannot assume that the implementation of BMPs will sufficiently mitigate any problems that the proposed project will have on aquatic systems...Despite the lengthy praise given to BMPs in the EA, there is no proof of “demonstrated ability” of BMPs to be successful in diminishing harm. (Bark) In order to mitigate potential fire hazards, the EA/FONSI requires that pile burning take place during the wet season only. This stipulation is in direct opposition to BMPs insisting that any sediment-causing activities occur during dry months only. How do you plan to uphold both stipulations simultaneously? (Bark)*

**Response to #2:** Best management practices (BMPs) applied to timber harvest operations and related forest management activities are the primary means of achieving state water quality standards on forestlands. To review an example, the reader can see the following EPA web site: <http://www.epa.gov/owow/nps/forestrygmt/>. BMPs are continually being evaluated both for implementation and effectiveness by federal and state agencies, researchers and private land owners. There are numerous examples in the scientific literature of studies in which BMPs have been evaluated for effectiveness at controlling non-point pollution; several of these articles were cited in the specialist report to the EAs.

For a recent example of BMP effectiveness at controlling sediment related water quality impacts the reader is directed to Effectiveness of Timber Harvest Practices for Controlling Sediment Related Water Quality Impacts ( Rashin et al., Journal of the American Water Resources Association 42(5):1307-1327. “Stream buffers were effective at preventing chronic sediment delivery to streams and physical disturbance of stream channels.” (From the abstract).

Pile burning does not cause sediment. Pile burning may result in exposed soil surfaces. However, exposed soil surfaces following pile burning are unlikely to result in sediment delivery to local streams, even during the rainy season because pile burning takes place after an adequate amount of rain has fallen in order to prevent the fire in the pile from spreading. In our numerous years of burning piles in the Cascades we have not observed any areas where erosion occurred because a pile was burned. There is generally unburned or charred debris (10-20% of the original pile) left on site that helps to contain any movement of ash or soil.

3. Fish: *Threatened anadromous fish populations must consider the impervious surface areas outside of project units and factor in sedimentation from this surrounding land. Sedimentation from surrounding development must be factored into the effects determination. Until this is accounted for, project activities cannot proceed.* (Bark)

**Response to #3:** The main impervious surface areas in the vicinity of the Road Mountain units, outside of the project units are the roads. Since timber hauling is limited to periods of dry road conditions, road related sediment inputs to streams are expected to be negligible (EA p. 35). Cumulative effects of the project are described in *EA Section 3.2.2.2*. The Selected Action incorporates very little road construction (0.2 mile), none with hydrologic connectivity and culvert replacement would take place only in low/no flow seasons. The 60' stream protection zones on perennial streams and 25' stream protection zones on intermittent streams are expected to prevent any decrease in stream shade that could result in an increase in stream temperature.

The determination of "no effect" is based on the distances from proposed project units to ESA listed fish habitat (4-19 miles to steelhead habitat, 12-19 miles to chinook habitat – EA p. 108) and on the factors stated above that would prevent increases in sediment input, stream turbidity or temperature to stream reaches potentially occupied by ESA listed fish species (EA p.94).

#### **1.1.2 Soil Productivity/ Fuels Treatments**

4. Organic soil components: *There are specific problems with the EA/FONSI's total lack of information on organic soil components....*

**Response to #4:** Organic soil components and soil organisms are included in the effects to soils, *EA section 3.2.4*. *EA Section 3.2.4.2* addresses the cumulative effects of the proposed action on soil. Efforts to minimize any soil disturbance or compaction are outlined in *EA Section 2.2.2*.

5. Ground based yarding: *Our observation of serious soil damage in other ground-based logging operations raises our concerns about this logging method.. ... Machine piling of fuels and pile burning can have serious adverse impacts on soils.*(ONRC)

**Response to #5:** *EA section 2.2.2* discusses design features to minimize soil productivity loss by ground based logging. Effects to soils are described in *EA section 3.2.4*.

Machine piling will only occur at landing sites. By burning slash piles during the cool, wet fall weather the amount of heat that is produced is reduced. The mechanical grinding of fuels is also ground-based but it will not employ heavy equipment and will not grind fuels into the soil. This treatment will not exceed soil compaction or disturbance guidelines that are a part of BMPs.

6. Soil mycorrhizae: *Without a discussion of the impacts to soil mycorrhizae, both Bark and the decision maker are precluded from making an informed decision regarding the proposed project, and the USFS cannot assert that there will be no permanent impairment of the soil. (Bark) The EA/FONSI fails to address how past logging has affected mycorrhizae in areas within the analysis area. (Bark)*

**Response to #6:** Mycorrhizae is considered a component of soil and is addressed in the EA as soil. Mitigation methods have been taken into account to reduce impact such as compaction and erosion (EA Section 2.2.2). In addition, Mycorrhizal fungi are not listed as a Special Status Species or a Special Attention Species therefore does not require additional survey or management.

### **1.1.3 Late Seral Habitat, Northern Spotted Owl, Snags and Coarse Woody Debris (CWD)**

7. Owl Habitat: *The project will result in 1,882 acres of (northern spotted owl) Dispersal Habitat downgraded, including the loss of 171 acres of NRF suitable habitat, which will no longer support nesting, roosting, and/or foraging behavior. (Bark) All stands that are late Successional old growth; in other words 80 years or older, should be excluded entirely from this project, staying completely out of LSOG stands.*

**Response to #7:** Timber stands within the Round Mountain timber sale are 40-68 years old and do not contain old growth, LSOG, NRF or late-successional habitat. The Selected Action is a light to moderate thinning in dispersal habitat (EA p. 111)

8. *New information on the Threatened northern spotted owl indicates that there are significant new uncertainties for the owl that have not been fully considered at the regional or local scale. (ONRC)*

**Response to #8:** New information on the northern spotted owl has been reviewed. The conclusions of this review are described in DR **section 5.0**, p. 8.

9. Design Features: *The Proposed Action fails to adhere to conservation stipulations enacted for the protection of the northern spotted owl and therefore should be withdrawn. ..Furthermore, this project very poorly adheres to BMPs concerning spotted owl protection. During the critical nesting period, While there might not be a nest located at the time of the survey, allowing logging and hauling could assure that there would not be nests there in the near future due to disturbance. (Bark) Just because FWS does not require surveys for Threatened spotted owls, NEPA has an independent mandate to become well-informed of the actual consequences of major federal actions. Before deciding to log suitable habitat the agency must conduct protocol surveys for spotted owls and their prey major species. (ONRC) Further, we understand that the agency took advantage of its new authority to reach an effects determination without consulting the US Fish and Wildlife Service.*

**Response to #9:** The Selected Action follows current management direction with regard to northern spotted owl. No nesting, roosting, or foraging habitat is being affected by the proposed thinning. A seasonal restriction will be implemented during owl nesting season to further reduce risks of affected potential breeding owls (DR **section 10.0**, pp. 24, 25). Consultation for this project is described in DR **section 6.0**, pp. 15.

10. Snags: *We agree that large snags (>20" dbh) snags are the most critical to retain, but smaller snag are also ecologically valuable and efforts should be made to protect all snags >10" to the extent possible. The agency must avoid any reduction of existing or future snags and logs (including as part of this project) until the applicable management plans are rewritten to update the snag retention standards. (Bark) Snags should be carefully inventoried by species, size, decay status, quality, and location during project planning, and they should be treated as "special habitats" and given special protection during project planning and implementation (i.e. keep workers out of the vicinity of snags so that OSHA doesn't order them cut). (Bark)*

**Response to #10:** Most wildlife species that utilize snags are associated with snags greater than 14.2 inches, and about a third of these species use snags >29" dbh (Rose et. al., 2001). Table 37 of the EA summarizes the CWD and snags within the project area. Design features common to all project areas would retain existing large snags (>20" dbh) and old growth trees (EA Section 3.2.5.1).

Any snags cut or incidentally knocked down, including those snags under 20" dbh, would be left on site as down logs and CWD, which is also valuable wildlife habitat and important for nutrient cycling. In addition, by accelerating the growth of the residual trees left after treatment, larger material would be available sooner (than without thinning) to contribute additional large snags to the future stand. The BLM is not obligated to save all snags. The project meets the standards and guidelines set forth in the RMP. Changing stand retention guidelines is outside the scope of this project.

#### **1.1.4 Other Forest Habitat**

11. Microhabitat Drying: *The EA/FONSI predicts that microhabitat drying will persist unabated for 10-20 years after thinning, at which time it would only begin to decrease. However, as explained in the EA, future harvest activities may restart as soon as the canopy closes (resulting in more microhabitat drying)...*

**Response to #11:** Some microhabitat drying could occur at the forest floor as canopies are opened-up, however, this would be minimal due to the high green tree retention after thinning (EA p. 43). In all of the units, 60 to 120+ trees per acre would be retained and 40 to 50% canopy closure would remain, which would provide shade.

### **1.1.5 Other Species of Concern/ Survey and Manage Species**

12. *The EA claims to protect BLM Special Status plant and animal species and relies upon statutes and regulations listed on page 3, including the 2004 Final Supplemental Environmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines (“2004 SEIS”) Now that the survey and manage ROD has been declared illegal by Judge Pechman, the BLM should survey for red tree voles and other survey and manage species at least in all stands older than 80 years old. (ONRC)*

**Response to #12:** Compliance with Survey and Manage direction is described in DR section 5.0 (DR p. 8).

### **1.1.6 Road Building And Road Renovation**

13. *Management should focus on thinning stands that are accessible from existing roads. If young stand thinning requires construction of temporary roads, the agency should do an analysis that illuminates how many acres of thinning are reached by each road segment so that we can distinguish between short segments of spur that allow access to large areas (big benefit, small cost) and long spurs that access small areas (small benefit, big cost). This can help inform the decision-maker’s balancing of the costs and benefits of thinning and roading. (ONRC) The agency assumes that temporary and semi-permanent new roads will have no effect because they are temporary. The agency has shown no scientific evidence for this assumption...The NEPA analysis must account for this (described in text) increased risk of temporary roads compared to permanent roads. (ONRC)...Temporary roads still cause serious adverse impacts to soil, water and wildlife, and spread weeds....Decommissioning such roads is not entirely successful and the soil compaction effects can last for decades.....The agency should consider avoiding building spurs by treating some areas non-commercially (e.g. thin lightly, create lots of snags, and leave the material on site). (ONRC) The NEPA analysis must address the significant cumulative watershed effects caused by past, present and foreseeable future road construction. (ONRC)*

**Response to #13:** EA Section 2.2.1 and 2.2.2 and DR pp. 4-5 discuss road work associated with this project. Effects associated with new road construction are described in the EA pp. 30-33, 95. Under the Selected Action approximately 4 miles of road would be renovated / maintained with less than a mile (0.2) of new natural surface road construction taking place. The proposed temporary road for the Selected Action is on a ridge top with no hydrologic connections. Project design features such as constructing roads in dry seasons, decommissioning roads, re-seeding, and use of erosion mats to stabilize soil will reduce the risk of effects to soil and aquatic systems. With regard to invasive species, All ground disturbing machines are required to be cleaned so as not to spread off site soil, plant parts and seeds (EA p. 19). Since the road system is behind locked gates that will further reduce the potential for spreading invasive species. EA Section 3.2.2.2 addresses cumulative effects common to all project areas. Within this section new road construction and existing road use are reviewed for possible cumulative effects specifically pertaining to watershed hydrology, and water quality.

### **1.1.7 Other Comments regarding Fuels Treatments**

14. *Paired with intense recreational use, increased likelihood of unauthorized access to roads, and human presence--the most common source of fire starts-- and this project will result in a more hazardous, not less hazardous, fire situation across the landscape. (Bark)*

**Response to #14:** Round Mountain is not an intense recreational use area because it is behind locked gates. Lack of access limits the probability of human fire starts, therefore there is no evidence that this project would result in a more hazardous fire situation.

The primary purpose of a fuel treatment is not to stop fires, but to change the behavior of a fire entering a fuel-altered zone, thus lessening the impact of that fire to an area of concern. This change in fire behavior is often quantified as a reduction in flame length, intensity, or rate-of-spread, and manifested as a change in severity or growth of the fire. This is best achieved by fragmenting the fuel complex and repeatedly disrupting or locally blocking fire growth, thus increasing the likelihood that suppression will be effective or weather conditions will change. (Stratton, 2004)

### **1.1.8 Cumulative Effects Analysis**

15. *The EA does not actually analyze the cumulative impacts of this project and other past, current, and foreseeable future projects, including timber sales, livestock grazing, herbicide use, mining projects, off-road vehicle use, and other recreation and management activities on the watershed (Bark). In order for the finding of no significant impact to meet the fifth stipulation listed in the EA/FONSI, future anticipated thinning projects must be factored in the cumulative effects determination. (Bark)*  
*The EA fails to disclose the watershed consequences at all spatial scales, as necessary for informed decision-making and as required by NEPA. Adequate cumulative effects analysis cannot be achieved with so many projects spanning such a wide range in various conditions. (Proctor)*

**Response to #15:** The interdisciplinary team evaluated the project areas in context of past, present and reasonably foreseeable actions [40 CFR 1508.27(b) (7)] (EA p. 4). Cumulative effects to resources are addressed on pages 4-5, 22-25, 33-35, 39, 44, 49, 117, 119 of the EA.

### **1.1.9 Invasive Weeds**

16. *This EA provides very little in the way of mitigation, requiring only “Ground disturbing equipment would be cleaned as needed to be free of off-site soil, plant parts and seed (e.g. noxious weeds) prior to entering the project area” (EA, 19). (Bark)*

**Response to #16:** Limited access due to the road system being behind locked gates, requiring ground disturbing equipment to be cleaned, and planting sites disturbed by timber sale activities (e.g. landings, skid trails) are effective ways to prevent the spread of invaders from one area to another.



### **1.1.10 Mitigation Measures**

17. *Where an environmental assessment relies on mitigation measures to reach a finding of no significant impact, that mitigation must be assured to occur and must “completely compensate for any possible adverse environmental impacts.” Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson , 685 F.2d 678, 682 (D.C. Cir. 1982). Until the BLM is able to substantiate its proposed mitigation measures – i.e., that they are appropriate, will be implemented, and will be effective – the agency must withdraw the proposed project.*

**Response to #17:** For this project, mitigation measures are not being applied after significant effects have been determined. Instead, the project has been designed to meet the standards and guidelines of the Resource Management Plan. These standards and guidelines are designed to reduce the risk of effect to resources. The project design features incorporated into the development of this project tie directly to the RMP standards and guidelines and the results of ESA consultation (e.g BMPs, seasonal restrictions).

### **1.1.11 Multi-project EA**

18. *This practice of large-scale NEPA analyses should be reserved for truly non-controversial projects, such as those in which focus exclusively on stands younger than 80 years old, minimal road construction, and using variable density thinning prescriptions. Since this project includes some controversial aspects, we are not highly supportive of the merged analysis in this case. (ONRC) Although the proposed actions may be similar for each of the 4 projects, their geographic range precludes the likelihood of similar environmental impacts. (Bark)*

**Response to #18:** All aspects of the proposal are consistent with an existing EIS (the Salem RMP). With regard to effects to aquatic systems, there is no physical mechanism for the proposed action in one watershed to translate across a topographic divide and directly affect a channel in a separate watershed EA p. 30). Though the EA analysis covers four project areas scattered over a large area, any decision for individual project areas is independent of the others. The Round Mountain project would thin stands from 40-68 years old (DR pp. 21-23).